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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.												
10/541,378	07/06/2005	Kazushi Mori	033082 M 260	8400												
7590 Smith Gambrell & Russell 1850 M Street, NW - Suite 800 Washington, DC 20036		05/01/2007	<table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">STEVENS, THOMAS H</td></tr><tr><td>ART UNIT</td><td>PAPER NUMBER .</td></tr><tr><td>2121</td><td></td></tr><tr><td>MAIL DATE</td><td>DELIVERY MODE</td></tr><tr><td>05/01/2007</td><td>PAPER</td></tr></table>		EXAMINER		STEVENS, THOMAS H		ART UNIT	PAPER NUMBER .	2121		MAIL DATE	DELIVERY MODE	05/01/2007	PAPER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/541,378	<b>Applicant(s)</b> MORI, KAZUSHI	
	<b>Examiner</b> Thomas H. Stevens	<b>Art Unit</b> 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/06/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1-25 were examined.

***Specification***

2. The disclosure is objected to since the "Summary of Invention" heading is absent. Furthermore, the Office suggests changing "Best Mode for Carrying Out the Invention" to "Detailed Description of the Invention". Correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 23 recites the limitation "the process apparatus" in line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Woods et al., (US Patent 4,816,208; hereafter Woods). Wood teaches a hybrid parallel/serial alarm management in which sensor signals are intelligently processed to produce abnormality indication signals (abstract).

Claim 1. A control system ("control systems", column 12, line 65) comprising: control means that controls a process (column 14, lines 27) apparatus, which performs a predetermined process (e.g., abnormal conditions, column 5, line 9) on an object to be processed (e.g., "material flow process", column 5, line 23), based on information (e.g., alarm messages, column 2, lines 5-9) to be detected in the process apparatus ("display...to show current disturbances" column 6, lines 23-28); and alarm generation ("alarm generation", columns 5-6, lines 68,1-3) means which generates an alarm when the detected information (e.g., alarm messages, column 2, lines 5-9) is off a (if process can work if required if it is inactive, column 8, lines 31-41) predetermined range (column 8, line 63), wherein the control means grasps a generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) of the alarm which is generated from the alarm generation ("alarm generation", columns 5-6, lines 68,1-3) means, and gives warning (e.g., alarm via detectors, column 2, lines 20-29) when the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) reaches a predetermined threshold (column 8, line 65).

Claim 2. The control system ("control systems", column 12, line 65) according to claim 1, wherein the control means can set a threshold of a generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) of an alarm which is generated from the alarm generation means, grasps the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) of the alarm, and gives warning (e.g., alarm via detectors, column 2, lines 20-29) when the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) reaches the set threshold.

Claim 3. The control system ("control systems", column 12, line 65) according to claim 1, wherein the process apparatus has a plurality of detection (multiple threshold detectors,, column 3, lines 15-16) means, and when an alarm is generated from one detection means, the control means automatically starts grasping (i.e., sensor, the alarm generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms).

Claim 4. The control system ("control systems", column 12, line 65) according to claim 1, wherein the process apparatus has a plurality of detection (multiple threshold detectors,, column 3, lines 15-16) means, and when an alarm is generated from a

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preset detection means, the control means starts grasping the alarm generation ("alarm generation", columns 5-6, lines 68,1-3) state.

Claim 5. The control system ("control systems", column 12, line 65) according to claim 1, wherein the alarm generation ("alarm generation", columns 5-6, lines 68,1-3) means is provided in the control means.

Claim 6. The control system ("control systems", column 12, line 65) according to claim 1, wherein the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) of the alarm is a number of alarm generations within a predetermined time.

Claim 7. The control system ("control systems", column 12, line 65) according to claim 1, wherein the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) of the alarm is a time from an alarm generation ("alarm generation", columns 5-6, lines 68,1-3) to a next alarm generation.

Claim 8. A control system ("control systems", column 12, line 65) comprising: control means that controls a plurality of process apparatuses, which perform predetermined processes on an object to be processed, based on information (e.g., alarm messages, column 2, lines 5-9) to be detected in the process apparatuses ("display...to show

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current disturbances" column 6, lines 23-28); and alarm generation ("alarm generation", columns 5-6, lines 68,1-3) means which generates an alarm when the information (e.g., alarm messages, column 2, lines 5-9) to be detected is off a (if process can work if required if it is inactive, column 8, lines 31-41) predetermined range (column 8, line 63), the control means including a plurality of apparatus control units that respectively control the plurality of process apparatuses based on plural pieces of information (e.g., alarm messages, column 2, lines 5-9) to be detected in the individual process apparatuses (e.g., of individual processes, filters sorts all alarms", column 3, lines 28-36) a host computer ("summary system display", column 3, lines 31-33) that receives partial information (e.g., alarm messages, column 2, lines 5-9) from the individual process apparatuses and controls the individual process apparatuses based on that information (e.g., alarm messages, column 2, lines 5-9), and a control apparatus ("control systems", column 12, line 65) that receives all or nearly all information (e.g., alarm messages, column 2, lines 5-9) from the individual process apparatuses and controls the individual process apparatuses (e.g., of individual processes, filters sorts all alarms", column 3, lines 28-36) based on that information (e.g., alarm messages, column 2, lines 5-9), the control apparatus ("control systems", column 12, line 65) including means that collects information (e.g., alarm messages, column 2, lines 5-9) received from the individual control units and alarm information (e.g., alarm messages, column 2, lines 5-9) (e.g., of an apparatus collecting data prior to the alarm on a serial display, column 3, lines 28-41) received from the alarm generation means, means that analyzes the collected information (e.g., alarm messages, column 2, lines 5-9), and

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means that grasps a generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) of the alarm generated based on the alarm information (e.g., alarm messages, column 2, lines 5-9), and gives warning (e.g., alarm via detectors, column 2, lines 20-29) when the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) reaches a predetermined threshold (column 8, line 65).

Claim 9. The control system ("control systems", column 12, line 65) according to claim 8, wherein the means that gives warning can set a threshold of a generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) of an alarm which is generated from the alarm generation ("alarm generation", columns 5-6, lines 68,1-3) means.

Claim 10. The control system ("control systems", column 12, line 65) according to claim 8, wherein the control apparatus ("control systems", column 12, line 65) further includes means that outputs a result of the analysis and the generation state of the alarm ("alarm generation", columns 5-6, lines 68,1-3)

Claim 11. The control system ("control systems", column 12, line 65) according to claim 8, wherein each of the process apparatuses has a plurality of detection (multiple threshold detectors,, column 3, lines 15-16) means, and when an alarm is generated

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from one detection means, the control apparatus ("control systems", column 12, line 65) automatically starts grasping the alarm generation ("alarm generation", columns 5-6, lines 68,1-3)state.

Claim 12. The control system ("control systems", column 12, line 65) according to claim 8, wherein each of the process apparatuses has a plurality of detection (multiple threshold detectors,, column 3, lines 15-16) means, and when an alarm is generated from a preset detection means, the control apparatus ("control systems", column 12, line 65) starts grasping the alarm generation state ("alarm generation", columns 5-6, lines 68,1-3)

Claim 13. The control system ("control systems", column 12, line 65) according to claim 8, wherein the alarm generation ("alarm generation", columns 5-6, lines 68,1-3) means is provided in the control means.

Claim 14. The control system ("control systems", column 12, line 65) according to claim 8, wherein the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) of the alarm is a number of alarm generations within a predetermined time.

Claim 15. The control system ("control systems", column 12, line 65) according to claim 8, wherein the generation state (spec. pg. 40, generation state, "the number of alarms

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generated with a predetermine time"; column 3, lines 40 different levels of alarms) of the alarm is a time from an alarm generation ("alarm generation", columns 5-6, lines 68,1-3) to a next alarm generation.

Claim 16. A control method that controls a process (column 14, lines 27)apparatus, which performs a predetermined process (e.g., abnormal conditions, column 5,line 9)on an object to be processed (e.g., "material flow process", column 5, line 23), based on plural pieces of information (e.g., alarm messages, column 2, lines 5-9) to be detected in the process apparatus ("display...to show current disturbances" column 6, lines 23-28), the method comprising: grasping a generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms)of an alarm, which is generated when the detected information (e.g., alarm messages, column 2, lines 5-9) is off a (if process can work if required if it is inactive, column 8, lines 31-41) predetermined range (column 8, line 63); and giving warning when the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms)reaches a predetermined threshold (column 8, line 65).

Claim 17. The control method according to claim 16, further comprising setting a threshold of a generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) (columns 8 & 9, lines 65, 1-7) of the alarm which is generated when detected

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process information (e.g., alarm messages, column 2, lines 5-9) is off a (if process can work if required if it is inactive, column 8, lines 31-41) predetermined range (column 8, line 63), grasping the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) of the alarm, and giving warning when the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) reaches the set threshold.

Claim 18. The control method according to claim 16, wherein the process apparatus has a plurality of detection (multiple threshold detectors,, column 3, lines 15-16)means, (e.g., of an apparatus collecting data prior to the alarm on a serial display, column 3, lines 28-41) and when an alarm is generated from one detection means, grasping the alarm generation ("alarm generation", columns 5-6, lines 68,1-3) state automatically starts.

Claim 19. The control method according to claim 16, wherein the process apparatus has a plurality of detection (multiple threshold detectors,, column 3, lines 15-16)means, and when an alarm is generated from a preset detection means, grasping the alarm generation ("alarm generation", columns 5-6, lines 68,1-3) state starts.

Claim 20. The control method according to claim 16, wherein the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine

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time"; column 3, lines 40 different levels of alarms) of the alarm is a number of alarm generations e.g., of alarms on a summary display unit, column 3, lines 36-41) within a predetermined time.

Claim 21. The control method according to claim 16, wherein the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) of the alarm is a time from an alarm generation ("alarm generation", columns 5-6, lines 68,1-3) to a next alarm generation.

Claim 22. A process system comprising a process apparatus which performs a predetermined process (e.g., abnormal conditions, column 5, line 9) on an object to be processed (e.g., "material flow process", column 5, line 23), and a control system ("control systems", column 12, line 65) which controls the process apparatus, the control system ("control systems", column 12, line 65) including: control means that controls a process (column 14, lines 27) apparatus, which performs a predetermined process (e.g., abnormal conditions, column 5, line 9) on an object to be processed (e.g., "material flow process", column 5, line 23), based on information (e.g., alarm messages, column 2, lines 5-9) to be detected in the process apparatus; and alarm generation ("alarm generation", columns 5-6, lines 68,1-3) means which generates an alarm when the detected information (e.g., alarm messages, column 2, lines 5-9) is off a (if process can work if required if it is inactive, column 8, lines 31-41) predetermined range (column 8, line 63), wherein the control means

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grasps a generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) of the alarm which is generated from the alarm generation means, and gives warning (e.g., alarm via detectors, column 2, lines 20-29) when the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) reaches a predetermined threshold (column 8, line 65).

Claim 23. A process system (i.e., "an alarm management system", column 15, line, 5) comprising which performs a predetermined process (e.g., abnormal conditions, column 5, line 9) on an object to be processed (e.g., "material flow process", column 5, line 23), and a control system ("control systems", column 12, line 65) which controls the process apparatus, the control system ("control systems", column 12, line 65) including: control means that controls a plurality of process apparatuses, which perform predetermined processes on an object to be processed (e.g., "material flow process", column 5, line 23), based on information (e.g., alarm messages, column 2, lines 5-9) to be detected in the process apparatuses; and alarm generation ("alarm generation", columns 5-6, lines 68, 1-3) means which generates an alarm when the information (e.g., alarm messages, column 2, lines 5-9) to be detected is off a (if process can work if required if it is inactive, column 8, lines 31-41) predetermined range (column 8, line 63), the control means including a plurality of apparatus control units that respectively control the plurality of process apparatuses based on plural pieces of information (e.g., alarm messages, column 2, lines 5-9) to be detected in the individual process

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apparatuses, a host computer ("summary system display", column 3, lines 31-33) that receives partial information (e.g., alarm messages, column 2, lines 5-9) from the individual process apparatuses and controls the individual process apparatuses based on that information (e.g., alarm messages, column 2, lines 5-9), and a control apparatus that receives all or nearly all information (e.g., alarm messages, column 2, lines 5-9) from the individual process apparatuses and controls the individual process apparatuses based on that information (e.g., alarm messages, column 2, lines 5-9), (e.g., of individual processes, filters sorts all alarms", column 3, lines 28-36) the control apparatus ("control systems", column 12, line 65) including means that collects information (e.g., alarm messages, column 2, lines 5-9) received from the individual control units and alarm information (e.g., alarm messages, column 2, lines 5-9) received from the alarm generation ("alarm generation", columns 5-6, lines 68, 1-3) means, means that analyzes the collected (e.g., of individual processes, filters sorts all alarms", column 3, lines 28-36) information (e.g., alarm messages, column 2, lines 5-9), and means that grasps a generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) of the alarm generated based on the alarm information (e.g., alarm messages, column 2, lines 5-9), and gives warning (e.g., alarm via detectors, column 2; lines 20-29) when the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) reaches a predetermined threshold (column 8, line 65).

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Claim 24. A computer readable storage (column 12, lines 1-13) medium containing software that allows a computer to control a process apparatus, which performs a predetermined process (e.g., abnormal conditions, column 5, line 9) on an object to be processed (e.g., "material flow process", column 5, line 23), based on plural pieces of information (e.g., alarm messages, column 2, lines 5-9) to be detected in the process apparatus, (e.g., of individual processes, filters sorts all alarms", column 3, lines 28-36) wherein the software grasps a generation state of an alarm, which is generated when the detected information (e.g., alarm messages, column 2, lines 5-9) is off a (if process can work if required if it is inactive, column 8, lines 31-41) predetermined range, and gives warning (e.g., alarm via detectors, column 2, lines 20-29) when the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) reaches a predetermined threshold (column 8, line 65).

Claim 25. A computer program (inherent property of a computer, column 12, lines 1-13) containing software that allows a computer (column 12, lines 1-13) to control a process apparatus, which performs a predetermined process (e.g., abnormal conditions, column 5, line 9) on an object to be processed, based on plural pieces of information (e.g., alarm messages, column 2, lines 5-9) to be detected in the process apparatus, wherein the software grasps a generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) of an alarm, which is generated when the detected information (e.g.,

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alarm messages, column 2, lines 5-9) is off a (if process can work if required if it is inactive, column 8, lines 31-41) predetermined range (column 8, line 63), and gives warning when the generation state (spec. pg. 40, generation state, "the number of alarms generated with a predetermine time"; column 3, lines 40 different levels of alarms) reaches a predetermined threshold (column 8, line 65).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure:

- US Patent 4,997,490 teaches a method for cleaning and rinsing wafers used in the production of integrated circuits.
- US Patent 6,314,328 teaches an alarm event generation method and apparatus for signaling an alarm for a process control system.
- US Patent 6,439,962 teaches an apparatus performs at least on of cleaning and drying a semiconductor wafer while rotating the semiconductor wafer.
- US Patent Application 2002/0124646 teaches a method for correctly detecting the level of a processing liquid.
- US Patent 6,650,409 teaches a semiconductor device and a semiconductor device.
- US Patent 4,816,208 teaches a hybrid parallel/serial alarm management system in which sensor signals are intelligently processed to produce abnormality indication signals.
- US Patent 5,170,359 teaches a method and apparatus for detecting transient episodes includes parallel connected transient episode detectors (peripheral devices) to measure short-lived disturbances concurrently, each uniquely associated in series with one of a multiplicity of analog sensors.
- US Patent 5,486,998 teaches a process controller is disclosed for controlling a process.
- Japanese Patent 10323607 teaches a bellows pump for injecting cleaning liquid for semiconductor wafer cleaning.
- Maeda et al., "Threshold Setting Assisted by Numerical Analysis Methods in Automatic Visual Inspection Using Gray-Scale Image Comparison" teaches a method to support fast product-specific threshold setting.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Tom Stevens whose telephone number is 571-272-3715.

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If attempts to reach the examiner by telephone are unsuccessful, please contact examiner's supervisor Mr. Anthony Knight 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Answers to questions regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) (toll-free (866-217-9197)).



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